

Clemson University

Asbestos Fact Sheet



LIQUEFIED ASBESTOS in handy pressurized cans for spraying on heating pipes, water pipes, above furnaces and around hot-air registers.

What is Asbestos?



Asbestos is a mineral – a rock. A rock composed of long strings of fiber; a natural “rock wool”.

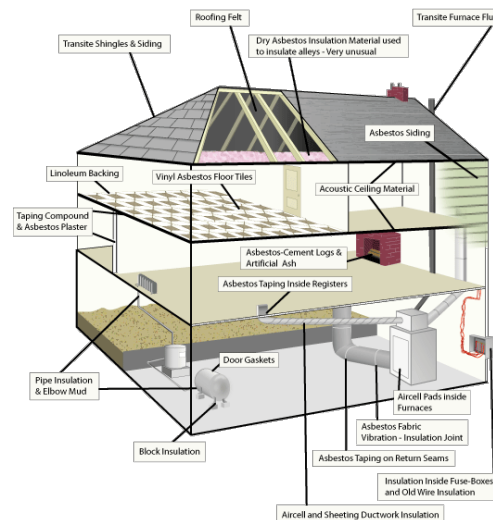
Because it is fire-resistant, chemical-resistant, and an excellent insulator, asbestos was added to a variety of building materials and other products.

Asbestos comes in several varieties. The most common types are Chrysotile (which is white) and Amosite (which is either brown or off-white).

What products contain asbestos?

Asbestos **may** be found in many different products and places. Broadly speaking, the materials listed below are assumed to contain asbestos if they were installed before 1981:

- Sprayed on fire proofing and insulation in buildings
- Insulation for pipes and boilers
- Wall and ceiling insulation
- Ceiling tiles
- Floor tiles
- Putties, caulks, and cement
- Roofing shingles
- Siding shingles
- Wall and ceiling texture
- Joint compound
- Plasters



Usually asbestos is mixed with other materials and may contain only a small percentage of asbestos. Depending on what the product is, the amount of asbestos in asbestos containing materials (ACM) may vary from 1% to 100%.

Building materials may contain asbestos even if new.

The use of asbestos was never completely banned in the United States. Products that are made for use in Canada and Mexico - neither of which has banned the use of asbestos - are currently available in the United States, and may contain asbestos.

When is Asbestos hazardous?



Asbestos is hazardous when it is “friable” or easily crumbled. When left intact and undisturbed, asbestos containing materials pose **no** health risk to occupants.

**Sprayed on asbestos insulation is friable.
Asbestos floor tile is not.**

Non-friable Asbestos Containing Materials - ceiling tiles, floor tiles, laboratory bench tops, shingles, fire doors, siding shingles, etc. - will not release asbestos fibers unless they are damaged in some way, such as cutting, sanding or scraping.

Wrapped asbestos insulation presents no hazard unless the protective covering is damaged and the asbestos is actually exposed.

What Are the Health Effects of Asbestos Exposure?

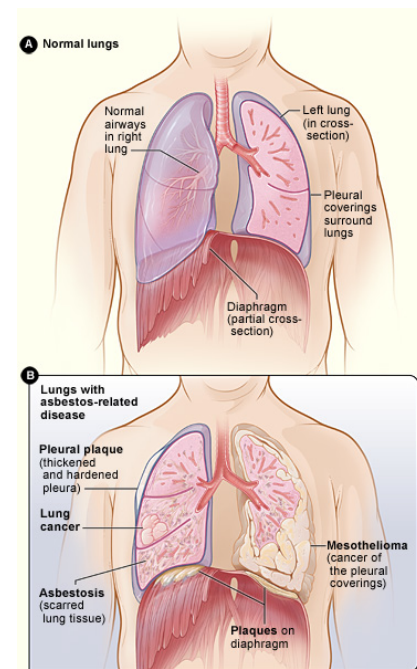
If asbestos fibers escape into the air **and** the fibers are inhaled or ingested **then** there could be harmful effects. The harm depends on the exposure (how long and how much asbestos) and how the asbestos fibers enter the body; usually exposure occurs by inhalation into the lungs, although ingestion (into the digestive tract) can happen.

There are three diseases typically associated with long term inhaled asbestos exposure – **asbestosis**, **lung cancer**, and **mesothelioma**.

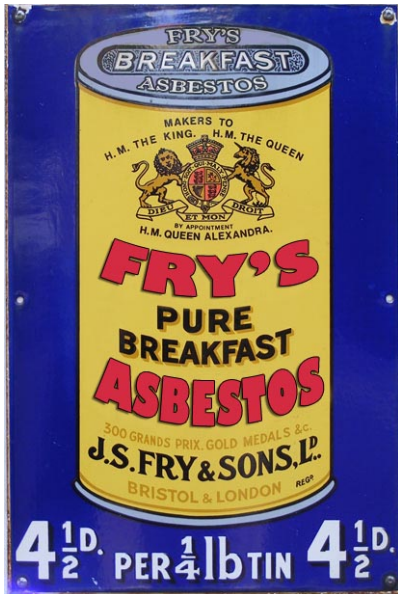
Asbestosis is a serious, chronic, non-cancerous lung disease. Inhaled fibers harm lung tissues, which causes scarring. Symptoms include shortness of breath and a dry crackling sound in the lungs while inhaling.

Lung cancer causes the largest number of deaths from asbestos exposure. The most common symptoms of lung cancer are coughing and a change in breathing. Other symptoms include shortness of breath, persistent chest pains, hoarseness, and anemia.

Mesothelioma is a rare form of cancer that most often occurs in the thin membrane lining of the lungs, chest, abdomen, and (rarely) heart. Virtually all cases of mesothelioma are linked with asbestos exposure.



What is your risk?



Don't eat things like this, for starters.

Your likelihood of developing asbestos related disease is influenced by:

The amount and duration of exposure. If you have long term exposure (months to years) of significant amounts of airborne asbestos fibers then it's more likely you'll to develop asbestos related problems. The vast majority of people who have contracted asbestos related disease had long term exposures well above permissible exposure limits.

Smoking. If you are exposed to asbestos **and** you smoke, you can be up to 90 times more likely to develop lung cancer than non-smokers who are not exposed to asbestos.

Avoiding Asbestos Exposure

Under no circumstances will Clemson employees be allowed to work in areas with dangerous levels of asbestos. If you do not know whether something contains asbestos or not, assume that it is until it is verified otherwise.

In most cases even experts cannot tell the difference between asbestos containing and non-asbestos containing forms of the same product (e.g. pipe insulation, fireproofing etc.) just by looking at it. The material must be sampled and tested to confirm whether or not it contains asbestos. Environmental Safety has a contractor available to assist in determining whether a material contains asbestos, and to assess the hazards.



Clemson employees are prohibited from intentionally disturbing asbestos containing materials.

Any removal or disturbance of asbestos must be performed by outside certified asbestos abatement contractors.

Never:

- Drill
- Hammer
- Cut
- Saw
- Break
- Damage
- Move
- Disturb

any material until it has been verified asbestos free.

Working Around Asbestos

Occasionally, employees may need to work in areas where asbestos containing materials are present but are not friable, and will not be disturbed by the work activity. If there is any concern that fibers may inadvertently be released, contact ES to request an assessment.

Floor Tiles

Some of our buildings have floors tiles that contain asbestos. Regular washing, waxing, stripping and buffing of these tiles will not release dangerous levels of asbestos. Broken and damaged asbestos floor tiles must also be removed by asbestos abatement workers.

Damaged Asbestos Materials

It is important to report any damaged asbestos-containing materials to Environmental Safety (1806) immediately. Debris from damaged asbestos must be cleaned up by licensed asbestos abatement workers; do not attempt to clean up or fix the problem yourself.

Disturb the material as little as possible. Take measures to prevent others from disturbing the spill until the asbestos abatement crew arrives.



For More Information

Contact the Asbestos Program Manager at wnewber@clermson.edu. There are many federal and state asbestos regulations, all with the goal of minimizing exposure to asbestos. EHS has copies of these standards and the Occupational Safety and Health Administration (OSHA) standard available.